

McGraw-Hill, Inc., Vol. 147, No. 2, pp. 60-61 (1997)). For at least the reasons set forth below, these rejections should be withdrawn.

The present invention, as defined by claim 1, relates to a method for inerting an aircraft fuel tank. The method comprising the steps of: (a) contacting compressed air with one or more first membrane modules at conditions effective to produce a first nitrogen-enriched air stream; (b) introducing the first nitrogen-enriched air stream into the fuel tank during periods of low demand for nitrogen-enriched air; (c) contacting compressed air with one or more second membrane modules at conditions effective to produce a second nitrogen-enriched air stream; and (d) introducing the second nitrogen-enriched air stream into the fuel tank during periods of high demand for nitrogen-enriched air. The first membrane modules have a lower O<sub>2</sub> permeance and a higher O<sub>2</sub>/N<sub>2</sub> selectivity than the second membrane modules.

*Edwards et al* discloses a permeable membrane apparatus having one or more hollow-fiber bundles enclosed in a single housing. The apparatus is designed to provide selectable flow rates. The apparatus can be used in an aircraft fuel tank inerting system.

*Edwards et al* does not disclose or suggest each of the features of the presently claimed invention. For example, *Edwards et al* does not disclose or suggest using hollow fiber membrane bundles with different properties in its permeator. *Edwards et al* varies the flow rate of NEA by accessing some or all of the capacity of the bundles in its permeator. See, e.g., col. 11, lines 25-68.

It does not disclose or suggest, however, the use of membranes with different separation characteristics within the same permeator. In sharp contrast to *Edwards et al*,

the present invention employs two different sets of membrane modules. The first membrane modules have a lower O<sub>2</sub> permeance and a higher O<sub>2</sub>/N<sub>2</sub> selectivity than the second membrane modules. *Edwards et al* does not teach or suggest this feature.

Therefore, *Edwards et al* clearly fails to anticipate the claimed invention.

*Dornheim* does not remedy the deficiencies of *Edwards et al*. Like *Edwards et al*, *Dornheim* does not disclose or suggest using membranes with varying separation properties to provide NEA in OBIGGS. Thus, even if the references could properly be combined, their combination would still not have led one skilled in the art to arrive at the claimed invention.


Accordingly, for at least all of the reasons set forth above, none of the applied references, either alone or in combination, discloses or suggests each of the features of the presently claimed invention. Therefore, there is no *prima facie* case of obviousness, much less one of anticipation, and the rejections under 35 U.S.C. §§ 102(b) and 103(a) should be withdrawn.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If the Examiner has any questions concerning this Reply, or the application in general, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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